HW7 Group 1, Austin Halvorsen

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# Problems

## Question 1

### (i)

### (ii)

### (iii)

## Question 2

### (i)

The null hypothesis would be . The alternative hypothesis would be

### (ii)

I would expect to have a positive sign, since having a larger population would result in more demand for rental housing.

I would expect to also have a positive sign, since higher income would likely mean that the cost of living is high as well, meaning housing prices and rental rates would be higher.

### (iii)

Because this is a log-log model, the interpretation of this model should be, \*"A 10% increase in population would result an increase of rent of 0.66%.

### (iv)

With a degree of freedom of 60 (64-4), at the 1% level, we

## Question 3

### (i)

### (ii)

### (iii)

### (iv)

## Question 4

### (i)

We can apply the property of variance:

### (ii)

We will need to identify the standard error, or

### (iii)

If then , therefore we can write our population regression model as:

We would estimate y by regressing y on and . This will allow us to calculate the stand error and coefficient of

## Question 5

### (i)

### (ii)

### (iii)

### (iv)

### (v)

# Computer Exercises

## Question 6

### (i)

### (ii)

### (iii)

### (iv)

### (v)

## Question 7

### (i)

### (ii)

### (iii)

### (iv)

### (v)

## Question 8

### (i)

### (ii)

### (iii)